

What is claimed is:

1. A device for wirelessly transmitting and receiving audio and video data, comprising:
 - a means for receiving a transmission stream having data formatted into distinct packets
 - 5 that includes at least one PID and an associated PSI, including a PAT, a PMT, a CAT and a NIT; and
 - a means for demultiplexing the PSI based upon one or more PID assignments to unique transport stream packets; and
 - a means for reassembling the PSI in accordance with a RTP data flow; and
 - 10 a means for encapsulating the RTP data flow into one or more IP packets with corresponding multicast addresses; and
 - a means for communicating the reassembled transport stream.
2. The wireless device in claim 1, wherein the means for communicating comprises a WLAN.
- 15 3. The wireless device in claim 1, wherein the means for reassembling the PSI includes a means for inserting a multicasting IP address for each associated PMT.
4. The wireless device in claim 3, wherein the PMT points to a program addressed by the
- 20 multicasting IP address.
5. The wireless device in claim 3, wherein the means for inserting a multicasting IP address for each associated PMT includes a means to calculate a CRC.
- 25 6. The wireless device in claim 3, wherein the PSI contains a descriptor field in which the multicasting IP address is stored.
7. The wireless device in claim 3, wherein the PSI is re-formed from the PAT and the PMT.
- 30 8. The wireless device in claim 1, wherein the PSI contains a flag to indicate that the PSI is unchanged from a prior transmission.
9. The wireless device in claim 1, wherein the PSI contains a flag to indicate that the PSI is changed from a prior transmission.

10. A mobile terminal adapted to wirelessly receive audio and video program data, comprising:

a means for receiving a transmission stream having data formatted into one or more distinct packets that include at least one multicasting IP address and an associated PSI,

5 including a PAT and a PMT;

a means for demultiplexing the PSI based upon one or more multicasting IP address assignments to unique transport stream packets in accordance with a RTP data flow;

a means for extracting a multicast address; and

a means for receiving a transmission stream associated with the multicast address.

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11. The mobile terminal in claim 10, wherein the receiving means comprises means for receiving data according to the IEEE 802.11 standards.

12. A method for mapping MPEG-2 TS into an IP-based RTP/UDP/IP stack comprising the steps of:

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receiving a transmission stream having data formatted into distinct packets that include at least one PID and associated PSI, including a PAT and a PMT;

demultiplexing the PSI based upon one or more PID assignments to unique transport stream packets;

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reassembling the PSI in accordance with an RTP data flow

encapsulating the RTP data flow into IP packets with a multicast address

communicating reassembled transport stream over a WLAN.

13. A method for mapping MPEG-2 TS into an IP-based RTP/UDP/IP stack comprising the steps of:

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receiving a transmission stream having data formatted into distinct packets that include at least one PID and an associated PSI, including a PAT and a PMT; and

demultiplexing the PSI based upon one or more PID assignments to unique transport packets in accordance with an RTP data flow; and

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extracting a multicast address; and

assembling a video program associated with the multicast address.

14. A method of decoding a digitally compressed video stream that has been packetized and transmitted over a packet-based network in a sequence of packets, the method comprising the steps of:

receiving packets associated with at least one multicasting IP address and associated

5 PSI, including a PAT and a PMT;

determining which transmitted packets associated with the PSI based upon a PID assignment to unique transport stream packets in accordance with an RTP data flow; and

a means for extracting a multicast address; and

a means for receiving a transmission stream associated with the multicast address.

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15. A computer readable medium for mapping MPEG-2 into an IP-based RTP/UDP/IP stack having stored thereon one or more data structure selected from the group comprising of:

one distinct packet that includes at least one first field containing an IP multicast address, a second field representing a PAT and an associated PMT; a third field containing data

15 representing an RTP head and a fourth field containing data representing a program.

16. The computer readable medium for mapping in claim 15, wherein the PSI further contains a flag to indicate that the PSI is unchanged from a prior transmission.

20 17. The computer readable medium for mapping in claim 15, wherein the PSI further contains a flag to indicate that the PSI is changed from a prior transmission.